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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,273	05/24/2001	Cheol Jin	2950-0194P	9250
2292	7590	09/14/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			PSITOS, ARISTOTELIS M	
			ART UNIT	PAPER NUMBER
			2653	

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/863,273	<b>Applicant(s)</b> JIN, CHEOL	
	<b>Examiner</b> Aristotelis M. Psitos	<b>Art Unit</b> 2653	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 5/9/05 & 1/25/05.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-129 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

Applicant's responses of 5/9/05 and 1/25/05 have been considered with the following results.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
1. Claims 11- 25,27-29 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizume et al considered with Finkelstein et al. Shimizume et al discloses a disc driving method in a recording/reproducing system wherein the recording modes are altered between a CAV and a CLV mode as required along the radius of a disc.

With respect to claim 11, Shimizume et al discloses a reproduction system – see the below description with respect to figure 6 and why the examiner considers the claims met under 103 considerations, the system refers to cd-rom – see col. 7 lines 5-10. The examiner interprets such to mean that atip data/sync signals embedded in a wobble physical track are present, especially because such is considered well known.

If applicants' can convince the examiner that such is not what Shimizume et al is discussing, then the examiner further relies upon the Fairchild et al disclosure – see atip recording for wobbled grooves in this environment – the entire document.

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It would have been obvious to modify the base system of Shimizume et al and modify it with the above teaching from Fairchild et al, motivation is to use standard disc formats commonly available.

The remaining two steps in claim 11, checking the frequency and determining (note there is no positive recitation that any change is made in this claim), are met by the signal reproduction (read – frequency detection) - see the description with respect to figure 7 starting at col. 10 line 35.

With respect to claim 12, the examiner concludes that although Shimizume et al is drawn to a reproducing system, Finkelstein et al teaches the direct read during write ability.

Although figure 6 focuses upon a reproduction system, the examiner considers the recording ability to be the mirror image thereof – i.e., information had to have been recorded onto the disc in order for it to be reproduced. The examiner concludes that because as disclosed the system is drawn to a recording or reproducing system, the recording ability is present.

Nevertheless, although there is no clear indication that the ability of reading of the information while recording in Shimizume et al, Finkelstein et al teaches in this environment, the ability of direct read while write.

It would have been obvious to modify the base system of Shimizume et al with the above teaching from Finkelstein et al, motivation is to ensure proper recording during writing as well as monitoring the required signal format parameters.

With respect to claim 13, the sync signal is by definition a predetermined signal, and the pll ability provides for a detection of the period thereof ( $f = 1/\text{period}$ ).

With respect to claim 14, this occurs when the radius increases (goes to the outer diameter of the disc).

With respect to claim 15, such is present, i.e., the speed is determined.

With respect to 16 & 17, such is present, i.e., the speed if based on a predetermined signal, that signal representing the speed for that section/segment the transducer is located.

With respect to claim 18, the reading of the sync information is interpreted as meeting the limitations of claimed “the properties of the recording medium”.

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With respect to claim 19, this claim contains similar limitations corresponding to claim 11 and the above analysis with respect to claim 11 is repeated and hence meets this claim as well.

With respect to claim 20, see the above analysis with respect to claim 12.

With respect to claim 21, see the above analysis with respect to claim 13.

With respect to claim 22, see the above analysis with respect to claim 14.

With respect to claim 23, see the above analysis with respect to claim 15.

With respect to claim 24, the low frequency is interpreted as the functioning of the lpf element 23 feeding that signal forward to elements 27, 28,30.

With respect to claim 25, the low frequency is measured/compared with a predetermined frequency.

With respect to claim 27, see the above analysis with respect to claim 18.

With respect to claim 28, this occurs when the system moves the transducers position from the outer diameter to the inner diameter.

Claim 29 is apparatus elements, and as far as the examiner can determine is met by the above combination of elements.

### ***Response to Arguments***

Applicant's arguments filed 1/25/05 have been fully considered but they are not persuasive.

Applicants' arguments focus on:

a) Shimizume differs from the claimed invention. Shimizume is seen as basing his decision concerning switching from the CAV to the CLV method on a distance measurement. Shimizume has no disclosure with respect to the steps recited in claim 11.

The following analysis is further made:

Claim 11

Shimizume

A method of changing a recording mode  
between CAV (Constant Angular Velocity)

title/abstract/ col. 1, line 15-col. 2 line  
50.

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and CLV (Constant Linear Velocity), comprising

the steps of:

(a) detecting a sync signal from signals col. 11 line 35 – col 13 line 47.  
embedded in a wobbled physical track; & col. 1 lines 15-20

(b) checking the frequency of the detected frequency checked –see above  
sync signal; and

(c) determining whether to change the  
recording mode or not based on  
the checked frequency.

In the above analysis with respect to the primary reference to Shimizume et al as it detects the reproduced signal through as further discussed in col. 9 lines 35 till col. 13 line 47, and note lines 45-50 reference to absolute time – which the examiner interprets as the atip information. The checking and determining steps are met by the systems response thereto through elements 103 and 20 as further discussed in col. 9 lines 55 plus.

The examiner takes the position that Shimizume et al inherently posses the claimed synch signal and further provides the reference to Fairchild further explains atip/sync signal/wobble. The examiner interprets the clock signals as discussed in Shimizume et al see the above noted passages, and col. 1 lines 15-20, as the sync signal and that such is inherently present - see again Fairchild especially col. 3 lines 12-20 with respect to synchronization mark in the atip.

b) The OA has failed to establish a prima facie case of motivation. Although the examiner considers the sync signal inherently present, support of such from Fairchild and motivation to include such – i.e., the use of existing formatted discs in the Shimizume et al system – so as to increase the use of the Shimizume et al system is considered proper.

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c) With respect to claims 12 and 20, the examiner regrets any miscommunication with respect to which figure 6. The examiner was pointing to figure 6 of Shimizume et al – a reproducing system, and hence the previous position should be so interpreted. The reference to Finkelstein was cited as teaching draw.

d) With respect to claims 14 and 22, again the examiner concludes that such a function is present in the combined systems, i.e., the rotating mode changes with respect to the checked frequency.

e) With respect to claims 15 and 23, applicant's attention is drawn to the above passages in Shimizume et al, with respect to the speed – see col. 13 lines 5-18 which discloses the changes in speeds (1x , 2x) and hence these claims are considered met.

f) The remaining dependent claims fall with their respective parent claim.

2. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 24 above, and further in view of Mashimo.

With respect to claim 26, there is no clear depiction of such a capability in the above noted combined references.

Mashimo teaches in this environment the ability of detecting cav/clv signals predicated upon the ability of counting pulses as required by the claim.

It would have been obvious to modify the base system as relied upon above with the teaching from Mashimo, motivation is to use existing counting circuitry in order to discriminate between appropriate modes of operation.

### **Conclusion**

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos  
Primary Examiner  
Art Unit 2653



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